

Amendments to the Claims

This listing of the claims will replace all prior versions, and listings, of claims in this application.

Listing of Claims

1. **(Currently Amended)** An isolated nucleic acid molecule selected from the group consisting of:

(a) an isolated nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO:1, or the complement thereof, wherein said nucleic acid molecule encodes a polypeptide having 6-phosphogluconolactonase activity and wherein said nucleic acid molecule comprises less than about 5 kb of nucleotide sequences which naturally flank the nucleotide sequence of SEQ ID NO:1;

(b) an isolated nucleic acid molecule comprising a nucleotide sequence which encodes a polypeptide comprising the amino acid sequence of SEQ ID NO:2, or the complement thereof, wherein the polypeptide has 6-phosphogluconolactonase activity and wherein said nucleic acid molecule comprises less than about 5 kb of nucleotide sequences which naturally flank the nucleotide sequence encoding the amino acid sequence of SEQ ID NO:2; and

(c) an isolated nucleic acid molecule comprising a nucleotide sequence which has at least 95% identity with the nucleotide sequence of SEQ ID NO:1, or the complement thereof, wherein said nucleic acid molecule encodes a polypeptide having 6-phosphogluconolactonase activity and wherein said nucleic acid molecule comprises less than about 5 kb of nucleotide sequences which naturally flank the nucleotide sequence of SEQ ID NO:1.

2-3. **(Canceled)**

4. **(Currently Amended)** An isolated nucleic acid molecule selected from the group consisting of:

(a) an isolated nucleic acid molecule comprising the nucleotide sequence of SEQ ID NO:1, or the complement thereof, wherein said nucleic acid molecule encodes only a polypeptide having 6-phosphogluconolactonase activity;

(b) an isolated nucleic acid molecule which encodes only a polypeptide comprising the amino acid sequence of SEQ ID NO:2 and having 6-phosphogluconolactonase activity, or the complement thereof; and wherein the polypeptide has 6-phosphogluconolactonase activity

(c) an isolated nucleic acid molecule comprising a nucleotide sequence which has at least 95% identity with the nucleotide sequence of SEQ ID NO:1, or the complement thereof, wherein said nucleic acid molecule encodes only a polypeptide having 6-phosphogluconolactonase activity.

5-8. **(Canceled)**

9. **(Currently Amended)** An isolated nucleic acid molecule comprising the nucleic acid molecule of ~~any one of claims 1 or 4 and 4-6~~ and a nucleotide sequence encoding a heterologous polypeptide.

10. **(Currently Amended)** A vector comprising the nucleic acid molecule of claims 1 or 4.

11. **(Original)** The vector of claim 10, which is an expression vector.

12. **(Currently Amended)** An isolated host cell transformed with the expression vector of claim 11.

13. **(Currently Amended)** The host cell of claim 12, wherein said cell is derived from a microorganism.

14. **(Original)** The host cell of claim 13, wherein said cell belongs to the genus *Corynebacterium* or *Brevibacterium*.

15-16. **(Canceled)**

17. **(Currently Amended)** A method of producing a polypeptide encoded by an expression vector comprising the nucleic acid molecule of ~~any one of claims 1 or 4 and 4-6~~, comprising culturing a host cell transformed with said vector in an appropriate culture medium to, thereby, produce the polypeptide.

18-24. **(Canceled)**

25. **(Previously Presented)** A method for producing a fine chemical, comprising culturing a cell transformed with the vector of claim 11 such that the fine chemical is produced.

26. **(Original)** The method of claim 25, wherein said method further comprises the step of recovering the fine chemical from said culture.

27. **(Canceled)**

28. **(Original)** The method of claim 25, wherein said cell belongs to the genus *Corynebacterium* or *Brevibacterium*.

29. **(Previously Presented)** The method of claim 25, wherein said cell is selected from the group consisting of: *Corynebacterium glutamicum*, *Corynebacterium herculis*, *Corynebacterium lilium*, *Corynebacterium acetoacidophilum*, *Corynebacterium acetoglutamicum*, *Corynebacterium acetophilum*, *Corynebacterium ammoniagenes*, *Corynebacterium fujiokense*, *Corynebacterium nitrilophilus*, *Brevibacterium ammoniagenes*, *Brevibacterium flavum*, *Brevibacterium ketosoreductum*, *Brevibacterium linens*, *Brevibacterium parafinoliticum*, and those strains set forth in Table 3.

30. **(Canceled)**

31. **(Original)** The method of claim 25, wherein said fine chemical is selected from the group consisting of: organic acids, proteinogenic and nonproteinogenic amino acids, purine and pyrimidine bases, nucleosides, nucleotides, lipids, saturated and unsaturated fatty acids, diols, carbohydrates, aromatic compounds, vitamins, cofactors, polyketides, and enzymes.

32. **(Original)** The method of claim 25, wherein said fine chemical is an amino acid.

33. **(Previously Presented)** The method of claim 32, wherein said amino acid is selected from the group consisting of: lysine, glutamate, glutamine, alanine, aspartate, glycine, serine, threonine, methionine, cysteine, valine, leucine, isoleucine, arginine, proline, histidine, tyrosine, phenylalanine, and tryptophan.

34-38. **(Canceled)**

39. **(Currently Amended)** The isolated nucleic acid molecule of claims 1(c) or 4(c)[[6]], wherein the nucleotide sequence has at least 97% identity to the nucleotide sequence of SEQ ID NO:1.

40. (New) The isolated nucleic acid molecule of claim 1, wherein said nucleic acid molecule comprises less than about 4 kb, 3 kb, 2 kb, 1 kb, 0.5 kb or 0.1 kb of nucleotide sequences which naturally flank the nucleotide sequence of SEQ ID NO:1 or the nucleotide sequence encoding the amino acid sequence of SEQ ID NO:2.